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ABSTRACT

This research examined what factors affect learners' discourse participation in a Web-conferencing environment operated in a graduate course. Subjects were nine master's degree students, majoring in Educational Technology at a women's university in Seoul, Korea. Results suggest seven factors that affect students' discourse in the following ways: (1) asynchronicity has advantages of increasing the quantities of participation and facilitating logical and theoretical discussions; (2) user-friendliness and transparency of the software system may influence the participants' success in conferencing; (3) difficult access to the system tends to result in cognitive overload; (4) learners easily accept and get accustomed to partially integrated use of conferencing in a face-to-face course, but not a fully integrated one; (5) learner-led conferencing that lacked instructors' appropriate mediation tends to discourage well-focused and productive discourse, and causes learners to feel "unfinished"; (6) self-confidence facilitates learners' active discourse participation; and (7) pre-existing social and group dynamics among learners influence discourse patterns. (Contains 15 references.) (AEF)

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I. Introduction

In the viewpoint that teaching and learning process is a form of discourse (Duffy & Cunningham, 1996; Jonassen, 1995; Vygotsky, 1978), it is argued that computer conferencing is a very appropriate medium for the development of higher-order learning, such as problem-solving and critical-thinking skills (Romiszowski & Mason, 1996). The current research tried to find out what factors affect and how these work on learners' discourse participation in a web-conferencing environment operated in a graduate course, mainly in terms of the quantity, quality, and styles of participation.

II. Theoretical Background

Research and field experiences in the previous 10 years prove that computer conferencing can support in effective ways learning and instruction (Harasim, Hiltz, Teles, & Turoff, 1995; Hiltz, 1990; Kaye, 1991; Mason, 1989). In the meantime, there are various inquiries about factors affecting learners' participation in online discourse (Lorentsen, Dirckinck-Holmfeld & Andersen, 1988; Grabowski, 1990; Grint, 1989; Harasim, 1987; McCreary & Van Duren, 1987; Gibson, 1991; Eastmond, 1992; Romiszowski & DeHass, 1989; Romiszowski & Jost, 1989; Mason, 1994). Many of the inquiries address more or less the following factors: (1) essential characteristics of computer conferencing, including asynchronicity, group nature, and text nature, (2) software capability and design, (3) anonymity and invisibility, (4) integration into a course, (5) contents and pedagogical approaches, (6) roles of an instructor (7) self-image and self-confidence, (8) cognitive overload, (9) gender, (10) grade level, and (11) system accessibility.

III. Research Methodology

1. Description of Research Subjects

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Participant's Characteristics: The research subjects were 9 master's degree students, majoring in Educational Technology at a women's university in Seoul, Korea. Those students were a very homogeneous group, having attended at the same university for the last 4-5 years since their undergraduate program. Moreover, majority of them took the same courses at the semester when the course the current research observed and analyzed was offered. Therefore, they had very high chances for not only social but also class-related communication on campus life.

Course Features: The current research was based on a graduate course, 'Research of Educational Technology'. It was offered in a mixed form of a face-to-face and online meeting. That is, it was partially online and face-to-face. In the both types of class meetings, learners were expected an active and self-led discussion. Readings and related materials were assigned in advance.

2. Research Methods

The current research employed interviews with the participants as a primary source, and online data logged in the conference as a secondary one. The collected data were analyzed through unitization and categorization (Lincoln & Guba, 1985).

VI. Findings

The results suggest 7 different factors and aspects significant for discussion as follows: (1) Asynchronicity, (2) software capability and design, (3) system accessibility, (4) integration into a course, (5) roles of an instructor (6) self-confidence, and (7) pre-existing social and group dynamics. The following describes how these factors work on participants' discourse.

(1) Asynchronicity has advantages of increasing the quantities of participation and facilitating logical and theoretical discussions. (2) User-friendliness and transparency of the software system may influence the participants' success in conferencing. (3) Difficult access to the system tends to result in cognitive overload. (4) Learners easily accept and get used to partially integrated use of conferencing into a face-to-face course, but not a fully integrated one. (5) Learner-led conferencing that lacked instructors' appropriate mediation tends to discourage well-focused and productive discourse. By contrast, it causes the learners to feel 'unfinished'. (6) Self-confidence facilitates learners' active discourse participation. (7) Interestingly, pre-existing social and group dynamics among learners influence on discourse patterns.

V. Conclusions and Suggestions

1. Essential features of computer conferencing

Asynchoronicity promotes learners' participation in discourse. In a traditional face-to-face instructional setting, we often find a few regular members dominating discussion. By contrast, mainly due to its asynchronosity (time independence), individuals are encouraged to participate more

equally online than face-to-face. This characteristic also facilitates a logical and theoretical discussion. Despite those advantages, however, its absence of spontaneous and real time exchange certainly limits fluent and rich discourse. Accordingly, a conferencing system may be considered more fruitful for courses, which demand and encourage theoretical thoughts and reflections among learners.

2. Software and hardware features:

Transparent and user-friendly design is deemed important in a computer conferencing. A simple, yet well-structured, interface clearly facilitates learners to decode and transmit messages. In the meantime, cognitive overload seems enhanced after a certain period of continued difficulty in system access, whether due to technical problems or the lack of a computer. Therefore, required quality of software and hardware and easy access to the system should be ensured so that it makes access convenient and regular.

3. Instructional features:

Learners feel positive toward the use of conferencing partially integrated into a fact-to-face pedagogical context. In order to increase learners' participation, however, attending online discourse should be a requirement necessary for grading. Learners-led discourse atmosphere, without an appropriate instructional mediation, appears to be not an appropriate pedagogical approach. Instead, strategic mediation in an appropriate time and place should be incorporated into an online course. Learners realize conferencing discourse as opportunities for learning 'from each other' and thinking 'from others' viewpoints'. However, all of the previously mentioned pedagogical contexts demand instructors very different roles from traditional face-to-face classes and even more difficult. Accordingly, new competencies and perspectives in the part of instructors should follows: so additional professional development may be inevitable in most higher education institutes that are willing to employ conferencing.

4. Learner features:

Self-confidence that learners contribute in online discourse seems to stimulate a greater level of participation. Furthermore, prior experiences of using any kind of online communication also appear to encourage participation especially in the initial stage of a course offering. Therefore, orientation or/and training on the use of the system should be always available for enhancing self-confidence.

Many of the previous research address 'anonymity' of participants, by dealing with subjects who are physically dispersed or not known to each other before the course offering. By contrast, the current research is interested in the impact of 'group dynamics' that have already existed among participants and brought into an online course. The research shows pre-existing group dynamics definitely has its own way of influence on the pattern of discourse. When accepting that not every online course is

offered for anonymous members, it is inevitable to understand social and cultural group dynamics of learners and further design and operate based on that. This factor has not been appropriately getting attention, yet a very significant one for a successful online discourse.

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